

REMARKS

Claims 1, 16 and 29 are amended herein. Claims in the instant case are Claims 1-32. No new matter has been introduced.

102(b) Rejection

Claims 1, 3, 6 and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent 6,243,075 to Fishkin et al. The Applicants have reviewed the cited reference and respectfully assert that the embodiment of the present invention as recited in Claim 1, as amended, is not anticipated by Fishkin and that Claims 3, 6 and 7, as they depend from independent Claim 1 and recite additional embodiments of the present claimed invention, are not anticipated by Fishkin.

Independent Claim 1 has been amended herein to recite that an embodiment of the present invention is directed to:

“A portable computer system comprising:
a bus;
a processor coupled to said bus;
a housing comprising a dielectric elastomer
electronic muscle material for causing said processor to
behave in a prescribed manner when handled....
wherein said processor automatically causes said
selectable graffiti display area to be displayed in
response to handling of said electronic muscle
material.” (emphasis added)

Claims 3, 6 and 7 are dependent on Claim 1 and recite further features of the present claimed invention.

In contrast to the present claimed embodiments, Fishkin does not teach or suggest the limitation of Claim 1 in which the portable computer system comprises “a dielectric elastomer electronic muscle material for causing said processor to behave in a prescribed manner when handled.....” The section cited by the Examiner fails to teach or suggest the claimed dielectric elastomer electronic muscle material. Fishkin does not mention an “electronic muscle material” nor does he mentions such material being a dielectric elastomer. Rather, Fishkin teaches a deformable material having embedded or contact pressure/deformation sensors. This material specified by Fishkin is clearly not a dielectric elastomer electronic muscle material as specified by Applicant in Claim 1. See Column 3, lines 4-10. Nowhere in this explanation is a dielectric elastomer electronic muscle material taught or suggested. Given that the material has various pressure and thermal sensors mounted within (Column 3, lines 28-29), it is unclear how the material taught by Fishkin can possibly suggest the dielectric elastomer electronic muscle material as claimed.

Moreover, the material taught by Fishkin actually teaches away from the claimed electronic muscle material because the deformable material of Fishkin needs to add embedded contact sensors to operate. In contrast, the claimed electronic muscle material provides these functionalities natively. Therefore, the material taught by Fishkin does not teach or suggest the embodiment of Claim 1.

Applicants respectfully assert that there is no basis for concluding that the device of Fishkin, or any of the other elements of Fishkin, use a portable computer

system having a housing comprising a dielectric elastomer electronic muscle material in the manner of Claim 1; specifically, in a portable computer system as recited in independent Claim 1 as amended herein. Applicants further submit that Fishkin does not teach or suggest the present claimed invention as recited in Claims 3, 6 and 7 that are dependent on Claim 1. Accordingly, Applicants respectfully assert that Claims 1, 3, 6 and 7 overcome the rejection under 35 U.S.C. § 102(b).

Independent Claims 16 and 29 recite similar limitations to those of Claim 1 argued above, and Applicants respectfully re-assert each and every point argued above regarding the rejections of Claim 1 that the present invention as recited in Claims 16 and 29, as amended, are not anticipated by Fishkin.

Moreover, dependent Claims 6 and 7 teach a portable computer system wherein "...in response to said determination of handedness, said electronic muscle material generates a plurality of function buttons in the proximity of user fingers" and wherein "...in response to pressure on certain of said plurality of function buttons, said electronic muscle material causes said processor to activate said selectable graffiti display..." The portable computer system, as claimed, is neither taught or suggested by Fishkin. Fishkin teaches a display of information and a shifting of a display area in response to handedness. Clearly Fishkin does not teach a material generating function buttons in response to handedness, nor does Fishkin teach the use of the function buttons for activating a graffiti display as taught in Claims 6 and 7. Similarly, dependent Claims 20 and 32, which

depend from independent Claims 16 and 29, respectively, and recite similar embodiments to those of Claims 6 and 7, are not anticipated nor rendered obvious by Fishkin. Thus, Applicants respectfully assert that embodiments of the present invention, as recited in Claims 6, 7, 20 and 32, are not anticipated by Fishkin.

103 Rejection

Claims 4, 5, 8-11, 16-20, 25 and 28-32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fishkin (US Patent No.6,243,075). Applicants have reviewed the cited references and respectfully assert that the present invention as recited in Claims 4, 5, 8-11, 16-20, 25 and 28-32 is not anticipated nor rendered obvious by Fishkin, and that the present claimed invention is therefore patentable over Fishkin.

Applicants respectfully re-assert each and every point argued above regarding the rejections of independent Claim 1 under 35 U.S.C. § 102(b). Applicants thus respectfully re-assert that, as amended herein, Claim 1 incorporates subject matter including “a portable computer system having a housing comprising... a dielectric elastomer electronic muscle material” (emphasis added). Fishkin teaches a deformable material having embedded or contact pressure/deformation sensors, but nowhere does Fishkin teach or suggest the limitation of a dielectric elastomer electronic muscle material. Applicants further submit that Fishkin does not teach or suggest the present claimed invention as recited in Claims 2-15 that are dependent on Claim 1. Accordingly, Applicants respectfully assert that Claims 1-15 overcome the rejection under 35 U.S.C. § 103(a).

As amended herein, Claim 16 incorporates similar embodiments to those of Claim 1 including "...a portable electronic device having a housing comprising... a dielectric elastomer electronic muscle material" (emphasis added). Fishkin teaches a deformable material having embedded or contact pressure/deformation sensors, but nowhere does Fishkin teach or suggest the limitation of such a dielectric elastomer electronic muscle material. Applicants further submit that Fishkin does not teach or suggest the present claimed invention as recited in Claims 17-28 that are dependent on Claim 16. Accordingly, Applicants respectfully assert that Claims 16-28 overcome the rejection under 35 U.S.C. § 103(a).

As amended herein, Claim 29 incorporates similar embodiments to those of Claim 1 including "...a method of altering the power state of a computer system comprising... in response to a user applying pressure to a dielectric elastomer electronic muscle material.....generating a signal wherein said signal is generated by said dielectric elastomer electronic muscle material..." (emphasis added). As previously stated, Fishkin teaches a deformable material having embedded or contact pressure/deformation sensors, but nowhere does Fishkin teach or suggest the limitation of such a dielectric elastomer electronic muscle material. Applicants further submit that Fishkin does not teach or suggest the present claimed invention as recited in Claims 30-32 that are dependent on Claim 29. Accordingly, Applicants respectfully assert that Claims 29-32 overcome the rejection under 35 U.S.C. § 103(a).

Dependent Claims 4 and 5 are rejected as being obvious over Fishkin. Claim 4 teaches an electronic muscle material causing a portable computer system to enter a power-on state when handled and Claim 5 teaches the computer entering a power-off state in response to the electronic muscle material not being handled for a predetermined period of time. Fishkin, in the cited reference, teaches powering on and off in response to a “flick” or “whack” or in response to the presence of light. Clearly Fishkin does not teach entering and exiting a power mode in response to a dielectric elastomer electronic muscle material sensing being handled. Claims 28 and 30 recite embodiments that are similar to Claim 5. Applicants respectfully assert that Claims 4, 5, 28 and 30 are not anticipated nor are they rendered obvious by Fishkin and therefore overcome the rejection under 35 U.S.C. § 103(a).

Additionally, dependent Claims 8-10 recite a portable computer system wherein a user is apprised of a message being displayed by the vibration of function buttons, the protrusion of function buttons or the vibration of the (dielectric elastomer) electronic muscle material. The portable computer system, as claimed, is neither taught or suggested by Fishkin. Although Fishkin teaches non-visual or tactile displays, these displays are based on internal actuators and auditory speakers. Thus, the material taught by Fishkin actually teaches away from the claimed electronic muscle material because the deformable material of Fishkin needs to add embedded actuators and speakers to operate. In contrast, the claimed electronic muscle material provides these functionalities natively.

Therefore, the material taught by Fishkin does not teach or suggest the embodiment of Claims 8 - 10.

Dependent Claims 13 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fishkin (6,243,075) and Kornbluh, an SRI international reference noted in the background to the invention. Claims 13 and 21 recite a portable device wherein the electronic muscle material vibrates natively at a frequency such that it functions as a speaker. Fishkin requires the addition of internal auditory speakers, therefore teaching away from the embodiments of Claims 13 and 21. Although Kornbluh teaches a dielectric elastomer material used in acoustic actuation and diaphragms, Kornbluh does not teach a portable computer system having a housing comprising such a system. Specifically, Kornbluh teaches dielectric elastomer materials for use as linear actuators and as artificial muscles for robots and animatronics. Nowhere does Kornbluh suggest to use a dielectric elastomer material for the housing of a portable computer system or portable electronic device. Therefore, there is no suggestion or instruction within the combination of Fishkin and Kornbluh to realize the claimed embodiments of Claims 13 and 21. Thus, Applicants respectfully submit that the combination of Fishkin and Kornbluh does not teach or suggest the present invention as recited in Claims 13 and 21.

CONCLUSION

Based on the arguments presented above, it is respectfully asserted that Claims 1-32 overcome the rejections of record and, therefore, allowance of these Claims is respectfully solicited.


Applicants further point out that no contested Claims remain in the present Application.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

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Respectfully submitted,

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